THE FUTURE OF DIGITAL PAYMENTS IN EUROPE

JUNIPER RESEARCH

DIMOCO

DIMOCO & JUNIPER RESEARCH
WHITE PAPER

THE FUTURE OF DIGITAL PAYMENTS IN EUROPE

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1. INTRODUCTION: THE FUTURE OF DIGITAL PAYMENTS IN EUROPE

In 2015, the value of mobile and online physical, virtualised and digital goods sales in Europe passed the €500 billion mark for the first time, reaching €570 billion. Overwhelmingly, the momentum for growth comes from the mobile (smartphone and tablet) sphere with these devices becoming primary mechanisms for the access, payment and (for digital goods) delivery of services.

Increasingly, transactional activity is migrating from in-store to online, while entertainment services, in particular, are transitioning from physical to digital; sales of CDs and DVDs are in decline as music and video are progressively delivered as downloads or streams.

This transformation of the way we consume and pay for goods and services has implications across the value chain – for consumers, merchants, brands and payment providers. It is taking place within a regulatory environment that is becoming more and more liberalizsed, creating competition and new opportunities at each stage in the retail lifecycle.

In retail, the sales of online goods, both physical and digital, is no longer the preserve of the pure play online retailer. Indeed, a majority of mid-sized and large retailers are transitioning to a hybrid approach to maximise their engagement opportunities with consumers.

Meanwhile, as content migrates to digital, there is an attendant trend away from content ownership to content access; it is perceived as far more critical to be able to, say, listen to a song on multiple devices than to own it. It also means that, increasingly, the device on which you pay for the content may not be the device on which you primarily access that content.

From a payments perspective, it is critical to offer consumers an array of mechanisms whereby transactions can be fulfilled and, with an online environment, that is geared toward the device on which a given site is being browsed and payments are being made. As competition in the online space intensifies, merchants that fail to offer payment choice and an optimal payment experience face losing customers not only for the transaction in question, but also conceivably forever.

While credit and debit cards currently account for the vast majority of payments in European digital commerce, an array of alternative options have emerged which can both broaden the addressable base of paying users and increase the scale of average spend in the online space. These range from eWallets – some of which, such as PayPal, do not require the user to enter card details – to carrier billing, which allows users to pay for goods and services via their mobile phone bill.

Furthermore, the scaling up in digital commerce migration has created need to increase the speed and transparency of transactions. The implementation of SEPA, and the forthcoming introduction of SCT Inst (SEPA Instant Credit Transfer), should alleviate some of the challenges in this space, while also reducing the costs involved in cross-border payments.

This White Paper provides an essential appraisal of the key trends in this rapidly developing marketplace, highlighting the primary factors shaping growth and assessing the opportunities presented by emerging payment mechanisms. It also presents a series of recommendations for current and prospective players across the payments value chain.

1.1 PAYMENT MECHANISMS COVERED IN THIS WHITE PAPER

- **Credit Card** – card issued by a financial company giving the holder an option to borrow funds.
- **Debit Card** – payment card that deducts money directly from a consumer's checking account to pay for a purchase.
- **Carrier Billing** – also known as direct mobile billing and direct to bill, this is a method of paying for merchandise by charging the purchase to a cellular telephone (mobile phone) account.
- **SCT (SEPA Credit Transfer)** – the Pan European Credit Transfer scheme that replaced domestic and cross-border Euro CT (Credit Transfers) throughout the SEPA zone.
- **SEPA Direct Debit** – a Europe-wide Direct Debit system that allows merchants to collect Euro-de nominated payments from accounts in the 34 SEPA countries and associated territories.

2. EXECUTIVE SUMMARY

2.1 OPPORTUNITIES & CHALLENGES BY PAYMENT MECHANISM

2.1.1.CREDIT & DEBIT CARDS

i. Opportunities

- Consumers are increasingly keen to migrate spending to online channels. Historically, consumers were reluctant to enter card details online, but that fear barrier has been significantly eroded. Hence, there is a real opportunity for card providers to grow spend levels in the future.

- With more than two in three European adults owning credit and/or debit cards, card payments are overwhelmingly the default payment mechanism on websites.

- Card transactional security in eCommerce (card not present, CNP) has been improved since the implementation of the CVN (Card Verification Number) and 3DSecure.

ii. Challenges

- The implementation of Chip & PIN technology at POS (Point of Sale) has seen fraud migrate to online channels. The scale of CNP (Card Not Present) fraud is likely to increase as fraudsters seek to exploit weaknesses in the system, including acquiring card details via data breaches. Further more, the fact that eCommerce per se continues to account for an ever larger share of the total market makes it a more lucrative proposition.

- For online payments, entering credit and debit card details can often be a time-consuming experience.

- A significant minority of adults in many European markets doesn't own a credit or debit card; while popular, such cards are by no means ubiquitous.

2.1.2 CARRIER BILLING

i. Opportunities

- New demographic prospects allow storefronts and content providers the opportunity to not merely facilitate payment by this demographic, but also develop more billable content targeted at them.
- Ideal for *ad hoc*, impulse purchases and recurring payments.
- High conversion rates for initial and repeat purchases.
- Allows carriers to monetise content on multiple devices, including tablets, laptops and PCs, making it increasingly attractive as an alternative payment mechanism.

ii. Challenges

- Some operators have stalled in implementation of carrier billing, citing unfavorable revenue share.
- When carrier billing has been implemented, some MNOs (Mobile Network Operators) will typically set daily or monthly spending limits at a low level to minimise exposure. Savings from customer care time devoted to dealing with inappropriate/unauthorised purchases can be outweighed by customer care time spent on failed purchases.
- Implementation of PSD2 (Payment Services Directive 2, due to be introduced in 2018) has implications for carrier billing in terms transaction size (maximum €50) and monthly spending (maximum €300), especially for ‘high-rollers’ who would ordinarily use carrier billing for purchases.

2.1.3 EWALLETS

i) Opportunities

- Reduced friction in online checkout compared to card payments, enabling one click payments.
- PayPal wallet widely now accepted by merchants and public and has laid the groundwork for other wallets.
- Era of open banking APIs (Application Programming Interfaces), facilitated by PSD2, will usher in a range of new consumer services and will make it easier for new payment intermediaries to launch.
- Several wallets now offer biometric authentication allied to tokenisation of payment details, meaning that such transactions are in many cases more secure than CP (Card Present) transactions.

ii. Challenges

- Verifying card ownership at the time of on-boarding a new customer has been a challenge for several eWallets, including Apple Pay.
- While consumer fears around eCommerce fraud have abated, some are still wary of storing credentials online and prefer entering details as and when they make payments.

2.2 OTHER KEY TAKEAWAYS

- We are seeing greater deployments of carrier billing to monetise products and services beyond digital goods, with a number of deployments for eTicketing platforms.
- Revenues from digital content billed via carrier billing in Europe will increase sharply over the next five years from just under €3.5 billion in 2016 to more than €11.5 billion in 2021, an average annual increase over the forecast period of 27%.
- European credit/debit card spend on digital content will grow at an average annual rate of 7.9% over the forecast period, reaching €36 billion by 2021.
- The two largest wallets depend exclusively on stored credit and debit card credentials; Apple Pay and Android Pay will together account for nearly €3.8 billion in digital goods payments in the region by 2021, or 10.5% of all card transactions by value.
- The combination of SEPA implementation, allied to SCT Inst, should result in a significant reduction in the cost of international payments and in the settlement time for those payments.

TABLE 1
EUROPEAN HANDSET ADOPTION VS CREDIT/DEBIT CARD ADOPTION, 2016

	HANDSET PENETRATION	HANDSETS (M)	HANDSETS SMARTPHONES	HANDSETS MASS MARKET HANDSETS	ADULTS WITH DEBIT CARDS	ADULTS WITH CREDIT CARDS
Albania	99.0%	3.00	9.3%	90.7%	22.5%	5.7%
Austria	155.3%	13.41	58.9%	41.1%	81.6%	41.4%
Belarus	124.4%	11.82	7.2%	92.8%	39.9%	16.9%
Belgium	133.2%	14.37	83.7%	16.3%	95.5%	43.0%
Bosnia & Herzegovina	89.7%	3.42	43.4%	56.6%	34.4%	9.5%
Bulgaria	151.3%	10.81	34.8%	65.2%	63.7%	13.5%
Croatia	112.9%	4.80	28.1%	71.9%	71.1%	40.3%
Cyprus	95.5%	1.12	84.0%	16.0%	50.4%	26.3%
Czech Republic	134.1%	14.30	33.9%	66.1%	65.9%	25.7%
Denmark	128.9%	7.17	68.7%	31.3%	97.4%	36.5%
Estonia	136.9%	1.79	35.5%	64.5%	93.8%	32.1%
Finland	177.0%	9.50	81.0%	19.0%	98.6%	63.1%
France	104.7%	69.94	56.9%	43.1%	90.0%	49.0%
Germany	124.9%	100.71	70.5%	29.5%	93.8%	52.2%
Greece	155.9%	16.81	44.7%	55.3%	63.4%	11.6%
Hungary	109.0%	10.77	43.9%	56.1%	59.9%	11.8%
Ireland	112.0%	5.22	67.0%	33.0%	90.3%	46.0%
Italy	124.7%	77.81	69.5%	30.5%	71.0%	40.2%
Latvia	142.4%	2.79	25.6%	74.4%	87.8%	23.3%
Lithuania	140.7%	4.08	33.5%	66.5%	66.7%	10.0%
Macedonia	114.8%	2.39	8.5%	91.5%	52.7%	21.2%
Malta	143.8%	0.60	61.9%	38.1%	82.4%	41.8%
Moldova	92.5%	3.76	8.1%	91.9%	15.8%	10.2%
Montenegro	98.8%	0.62	58.0%	42.0%	43.9%	16.1%
Netherlands	91.4%	15.53	89.4%	10.6%	98.7%	33.6%
Norway	99.5%	4.94	69.3%	30.7%	98.6%	67.2%
Poland	129.5%	49.87	48.7%	51.3%	54.3%	16.8%
Portugal	137.7%	14.88	60.3%	39.7%	66.7%	28.5%
Romania	113.3%	24.53	32.1%	67.9%	50.4%	11.6%
Russia	161.6%	227.98	30.0%	70.0%	47.0%	25.2%
Serbia	122.9%	8.77	38.2%	61.8%	63.6%	15.2%
Slovak Republic	128.1%	6.98	42.4%	57.6%	71.2%	17.0%

	HANDSET PENETRATION	HANDSETS (M)	HANDSETS SMARTPHONES	HANDSETS MASS MARKET HANDSETS	ADULTS WITH DEBIT CARDS	ADULTS WITH CREDIT CARDS
Slovenia	105.7%	2.19	37.1%	62.9%	91.3%	35.2%
Spain	100.5%	48.16	86.3%	13.7%	86.7%	59.8%
Sweden	139.2%	13.64	88.4%	11.6%	98.0%	45.4%
Switzerland	150.0%	12.07	79.0%	21.0%	84.1%	54.0%
Turkey	82.4%	65.41	46.6%	53.4%	43.3%	32.8%
UK	115.9%	74.86	78.1%	21.9%	91.8%	59.5%
Ukraine	133.2%	59.16	58.9%	41.1%	42.1%	30.5%
Total	**124.2%**	**1,019.96**	**54.1%**	**45.9%**	**68.5%**	**36.9%**

Note: adults defined as aged 15 and over as per World Bank
Source: Juniper Research

3. THE EUROPEAN CARRIER BILLING MARKET, TODAY & TOMORROW

3.1 KEY DRIVERS

The key drivers for carrier billing can be broadly summarised as follows:

- **Monetise New Demographics –** There is evidence of increasing smartphone adoption levels among teenage demographics. As a result, more content is being developed to cater to that demographic, who are legally excluded from card ownership in nearly all markets. As a result, the acquisition of paid content via credit card billing is beyond them.

- **Opportunity to Monetise Content Beyond the Mobile –** One of the clear advantages of carrier billing is that it enables merchants to offer an additional billing option across a range of connected devices. Carrier billing's capacity to bill across devices, conceivably any connected device, means that it stands up well in comparison to mechanisms such as payment cards.

- **Optimal for Impulse Purchases –** The beauty of the DCB (Direct Carrier Billing) process is that, following the decision to download content, it can be facilitated by a simple one click (trans-) action. In this regard it is ideal for impulse purchases, particularly by individuals who have not pre-registered a credit card. Indeed, carrier billing was a key revenue driver in the game Pokémon Go, where consumers who ran short of 'ammunition' (Poké Balls) could quickly and easily recharge their supplies by purchasing in-game currency via one click billing.

- **Subscription Opportunities –** While carrier billing has thus far been primarily used to monetise content on a pay-per-download basis or for in app purchases, it also offers potential to deliver revenues on a subscription basis. Under this model, the phone number will be stored, allowing it to be used as a recurring payment option, without any need for subsequent approvals, during the subscription period.

- **High Conversion Rates –** When DCB is added as a content billing option, conversion rates are markedly higher for first-time users and even for repeat purchasers, making it a particularly attractive option for merchants.
- **MNO Benefits –** Operators have the advantage of existing billing relationship with customers, which can be leveraged through the implementation of a DCB solution from a third party partner in two ways. Not only do they have the opportunity to monetise the hundreds of millions of mobile device owners excluded from digital content purchase due to lack of a credit/debit card, but operators can also increase the extent to which other consumers make purchases by the provision of a simple, one-click billing process.

3.2 KEY TRENDS

- **Level 2 & 3 Merchants Embrace Carrier Billing –** Digital content adoption on mobile devices accelerated dramatically in the wake of Apple's unveiling of its App Store in mid-2008. Subsequently, storefronts have been the primary mechanism for content discovery with Apple and Google dominating the market in this respect. However, as the migration to digital continues, we now see an array of smaller merchants focusing on D2C (Direct to Consumer) sales via their websites. These include merchants defined as both Level 2 (1 million to 6 million transactions per annum) and Level 3 (20,000 to 1 million transactions per annum) and offer new opportunities for carriers and carrier billing providers.
- **From Digital to Virtualised Goods –** We are increasingly seeing carrier billing deployments monetising products and services beyond digital goods. In Germany, for example, TAFmobile and the Verkehrsverbund Rhein-Sieg transport network introduced carrier billing for a four-trip ticket using the SWB easy.GO app.
- **Market Consolidation –** A marketplace formerly comprising more than a dozen significant players has seen substantial consolidation as market leaders seek to bolster their positions. For example, DIMOCO embarked on a series of acquisitions in 2015 and 2016, both to enhance its local capabilities in selected national markets and to gain a presence in regions where it did not offer services previously. Thus, it acquired the carrier billing and mobile messaging business of the Greek company Amaze in February 2015, followed by French messaging and billing company Mpulse in June 2015. More recently, in May 2016, DIMOCO announced it purchased the Italian carrier billing company Onebip from its parent company Neomobile. In June 2016, DIMOCO then acquired the payment division of Telekom New Media, a subsidiary of Magyar Telekom, to become the leading carrier billing aggregator in Hungary.

3.3 TRANSACTION VALUES

Juniper Research believes that revenues from digital content billed via carrier billing in Europe will increase sharply over the next five years from just under €3.5 billion in 2016 to more than €11.5 billion in 2021.This is an average annual increase over the forecast period of 27%.

By 2021, therefore, we believe that carrier billing will be used to bill around 21% of all European digital content, compared with 11% at present.

i. Comparison with Previous Forecasts

Estimates for regional carrier billed revenues for 2016 are approximately 9.9% below forecast levels. In large part this reflects the lower than expected values of the European digital content market (7.2% lower than previously anticipated). This can be partially attributed to the weakening British Pound, which fell sharply against the Euro in the aftermath of the British referendum results in favour of leaving the European Union. The vote led to a sharply depreciation of the Euro value of that country's digital content.

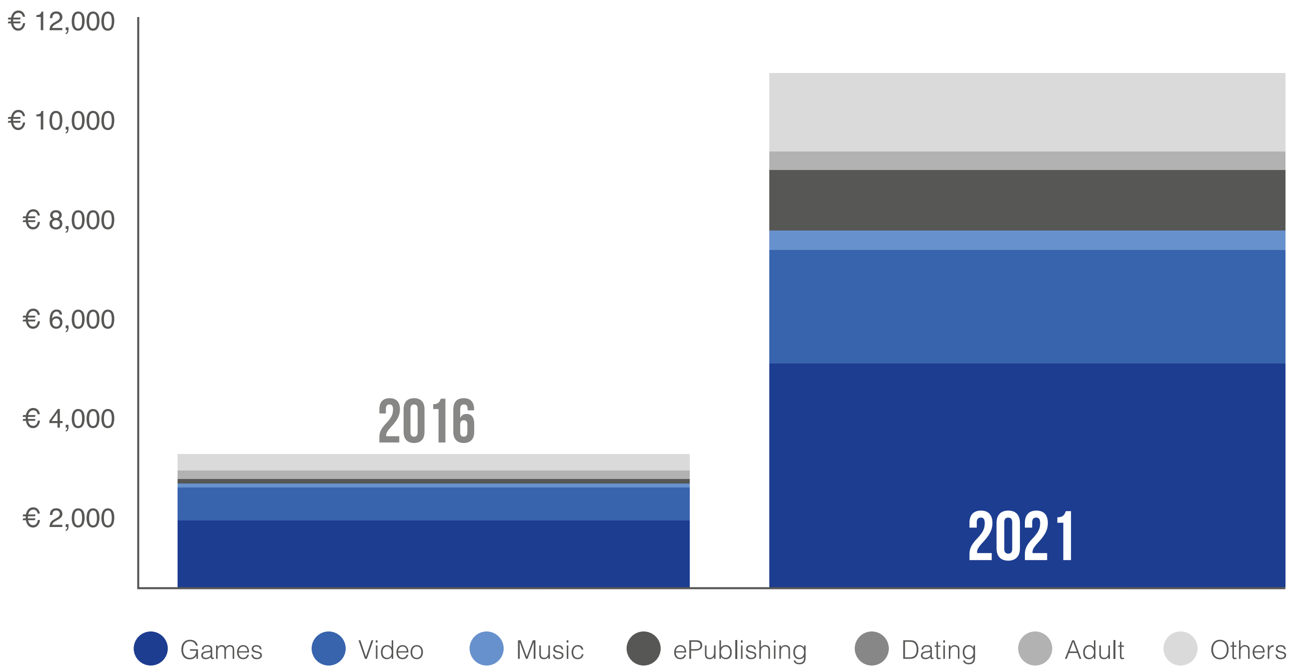
Assuming the Pound will continue to trade at lower values for the next five years, the net result for region-wide growth over the period for both carrier-billed content and digital content per se will be lower than previously forecast. In the case of the Euro value of carrier-billed digital content, revenues are now expected to lag below previous estimates by approximately two years.

ii. Industry Breakdown

When we look at the carrier billed revenues by sector, we can see that **Games** remains the largest single segment throughout the forecast period, rising from just under €2.0 billion in 2016 to more than €5.6 billion by 2021. This was the most resilient content segment in 2016, experiencing stronger than anticipated growth due in large part to the rapid migration from physical to digital format. Smartphone game revenues received a boost from the remarkable success of Pokémon Go with nearly 2 million paying users in Germany and more than 1 million in the UK. It is estimated that European users generated around €75 million in the 6 weeks after the game's launch, with carrier billing as a key mechanism for in-app payment.

While carrier-billed **Video** revenues were lower than anticipated due in large part to the 'Brexit' factor outlined above, the market remains relatively buoyant with a raft of subscription online TV services increasingly challenging the traditional linear viewing model. At the same time, telco TV offerings from players such as BT, Deutsche Telekom and Telefonica are also gaining traction. We envisage carrer-billed being particularly prevalent for one-off purchases for Video on Demand and download; annual growth will marginally outstrip that of the Games segment with revenues reaching €2.2 billion by 2021.

FIGURE 1
EUROPEAN DIGITAL CONTENT REVENUES MONETISED THROUGH CARRIER BILLING (€M), BY CONTENT TYPE, 2016 & 2021



Source: Juniper Research

Purchases of **Music** via carrier billing continue at a comparatively low level thanks, in part, to the ongoing prevalence of iTunes as a purchase mechanism. However, both Deezer and Spotify have recently extended the availability of carrier billing options in Europe (the former to Ireland, the latter to Italy and Germany), illustrating how consumer migration from music download to streamed services offers the opportunity for greater ongoing revenues. We believe that, although the Euro values of UK revenues will be depressed, overall growth in the region will be strong, with revenues reaching €445 million by 2021.

TABLE 2
EUROPEAN DIGITAL CONTENT REVENUES MONETISED THROUGH CARRIER BILLING, BY CONTENT TYPE, 2016 & 2021 (€M)

	2016	2021	GROWTH
Games	€ 2,012	€ 5,827	189.6%
Video	€ 681	€ 2,208	224.2%
Music	€ 112	€ 445	297.3%
ePublishing	€ 99	€ 1,191	1,103.0%
Dating	€ 23	€ 80	247.8%
Adult	€ 132	€ 309	134.1%
Other	€ 404	€ 1,454	259.9%
Total	**€ 3,463**	**€ 11,513**	**232.5%**

Source: Juniper Research

Carrier billing usage in the **ePublishing** space continues to be constrained by the limited availability via Amazon along with a slowdown in digital publishing migration. While eBooks now account for 17% of sales in the UK, the share is markedly lower in countries such as Germany (4.3%), Spain (3.0%) and France (2.9%). In the medium term, however, as Amazon's dominance of the eBook space is gradually eroded, we foresee carrier billing revenues rising sharply, approaching €1.2 billion annually by 2021.

Despite overall digital content revenues from **Adult** and **Dating** plateauing as a result of lower sales in the UK, Adult revenues from carrier billing in 2016 were in line with previous forecasts. Dating carrier billed revenues exceeded forecasts by around 10%. In the future, Adult content will provide a steadily increasing stream of revenue across Europe, reaching €309 million by 2021; Dating, although niche, is expected to outperform previous expectations and reach €80 million by 2021.

We should point out that these revenues do not include those from Gambling, which Juniper Research defines as a service rather than content. This is currently a small but growing area. Several companies, including Mansion, PokerStars, Probability, Boylesports and Gaming Realms now permit UK customers to make lower value deposits using carrier billing. Even though carrier billing currently accounts for a negligible proportion of European online casino wager of just under €112 billion in 2016 (rising to €165 billion by 2021), it is likely to increase in popularity among casual players of slot-style gaming, eclipsing €100 million in annual deposits by the end of the forecast period.

4. THE EUROPEAN CREDIT CARD PAYMENTS ECOMMERCE MARKET, TODAY & TOMORROW

Debit and credit cards have been the primary mechanisms for online payment since the beginning of eRetail - with most websites opting to make these the first payment systems which are enabled. In part, this reflected their prevalence in most developed markets where eRetail first became established; nearly 69% of European adults now own a debit card and more than one in three (37%) own a credit card. Furthermore, their attraction to merchants has increased since the implementation of the CVN and the strict security protocols demanded by card schemes such as Visa, Mastercard and American Express.

Nevertheless, this still means that nearly one in three European adults are excluded. Hence, while debit and credit card payments are likely to remain the predominant payment mechanism throughout the forecast period, an array of alternative payment mechanisms are emerging in the online space. The use of eWallet services such as PayPal is increasing and is particularly strong in Germany; in France, Paylib, an eWallet containing cards supported by the interbank scheme Carte Bancaire, has become the most popular alternative payment mechanism.

Meanwhile, in the Netherlands, the iDeal online payment mechanism based on SEPA Credit Transfer is extremely popular. It reportedly accounts for approximately 56% of all online transactions in H1 2015, dwarfing the 18% of credit and debit cards combined.

However, when we focus exclusively on the market for digital content (as opposed to eRetail per se), then the penetration of alternative payment mechanisms is much lower. Credit and debit cards account for the overwhelming majority of transaction values here, although we see an upsurge in use cases where stored card credentials are used for payment (e.g. in the case of iTunes) rather than the card itself.

4.1 KEY TREND: RISE IN CNP FRAUD

One corollary of the transition in European POS transactions to Chip & PIN was a rise in CNP fraud with fraudsters seeking to attack less secure transactions. In Europe, around 60% of card fraud is now associated with CNP transactions.

The increasing size of the eRetail market had made it more attractive to fraudsters. A recent study by Ingenico found that three European markets – the Netherlands, France and Russia – had particularly high online fraud rates (as measured by fraud chargeback rate) with merchants in these markets only recently starting to develop expertise and fraud prevention tools to tackle this illegal online activity more effectively.

At the same time, fraud trends are largely driven by the vast quantities of identity data available to cybercriminals following data breaches. 2015 was a record year for data breaches with well-known consumer brands such as TalkTalk and Tesco in the UK being subjected to attacks.

Indeed, Juniper Research believes that the fraud rates on card payments for digital goods and services are, as a proportion of the total market value, higher than for physical goods purchases. We estimate that the value of CNP fraud in the European digital goods market will be €150 million in 2016, a figure we expect to rise sharply to €304 million by 2020 despite merchants increasing their spending on fraud mitigation.

While compliance with the PCI DSS (Payment Card Industry Digital Security Standard) provides a more secure transaction environment and helps reduce the overall quantity of stolen card data in circulation, it should be noted that it does not prevent identity thieves from using data already compromised from another source. It also does not protect the merchant from accepting potentially fraudulent transactions at checkout.

4.2 KEY TREND: REDUCTION IN PAYMENT FRICTION

Payment mechanisms, such as PayPal, have enjoyed tremendous success in no small part due to their ability to reduce friction when placing an order as they have obviated the need to enter card details.

Thus, Juniper believes that the entry of ‘OS-Pay’ (Apple Pay and Android Pay) to the market is likely to play an extremely important role in merchants’ future strategy. As biometric authentication becomes more common as a means of avoiding password or PIN entry, purchase friction can be further reduced. In the present app landscape, with average annual revenue per user falling, it is clear that any strategy that smooths the payment process for additional app content or other goods will be desirable to the seller.

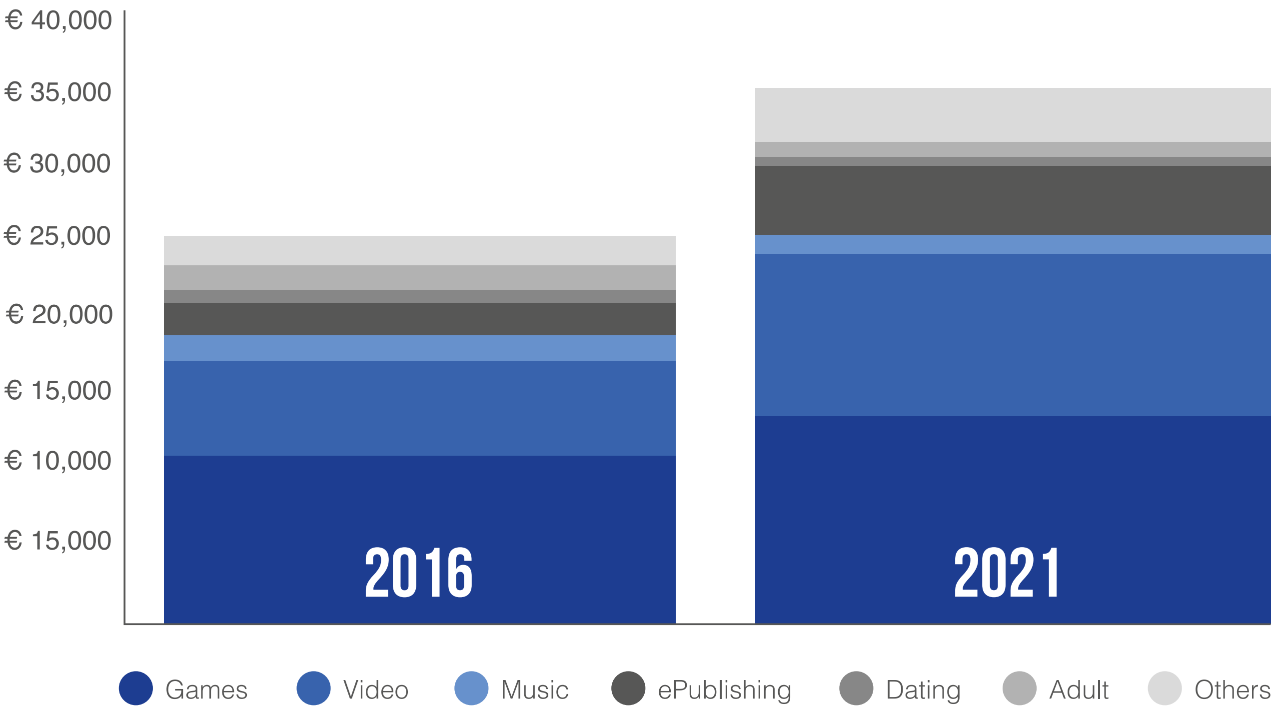
Meanwhile, the integration of an OS-Pay service, either into the app or mobile website, means that the consumer is presented with an increasing choice in terms of payment options as card or bank account details are no longer required.

4.3 CREDIT & DEBIT CARDS: MARKET FORECASTS

We can see that credit and debit cards (including those cards stored in eWallets, which is essentially a convenient proxy for the cards themselves) will continue to account for the bulk of digital content purchases by value over the next five years. However, the proportion of total spend will decline from 76% in 2016 to 66% by 2021 due primarily to pressures from non-card payments from eWallets and carrier billing. Credit/debit card spend will grow at an average annual rate of 7.9% over the forecast period, reaching €36 billion by 2021.

It is also worth observing that in Europe we envisage that the two largest wallets dependent exclusively on stored credit and debit card credentials, Apple Pay and Android Pay, will together account for nearly €3.8 billion in digital goods payments in the region by 2021, or 10.5% of all card transactions by value.

FIGURE 2
EUROPEAN DIGITAL CONTENT REVENUES MONETISED THROUGH CREDIT OR DEBIT CARDS (€M), BY CONTENT TYPE, 2016 & 2021



Source: Juniper Research

Of the key content sectors, **Video** displays the strongest growth in terms of card payment values, reflecting the wider trend of video content migrating to digital and its monetisation primarily via (higher value) subscriptions. Conversely, card revenues from digital **Adult** services will be in decline by the end of the period with industry revenues plateauing as players struggle to monetise offerings in the face of a plethora of free content.

Overall, the European market for digital content is expected to increase from just over €32 billion in 2016 to €54 billion in 2021.

TABLE 3
EUROPEAN DIGITAL CONTENT REVENUES MONETISED THROUGH CREDIT OR DEBIT CARDS (€M), BY CONTENT TYPE, 2016 & 2021

	2016	2021	GROWTH
Games	€ 11,823	€ 15,122	27.9%
Video	€ 6,491	€ 13,266	104.4%
Music	€ 1,348	€ 1,482	9.9%
ePublishing	€ 2,142	€ 2,836	32.4%
Dating	€ 727	€ 772	6.2%
Adult	€ 1,165	€ 974	-16.4%
Other	€ 919	€ 1,582	72.1%
Total	**€ 24,616**	**€ 36,033**	**46.4%**

Source: Juniper Research

5. THE EUROPEAN SEPA ECOMMERCE MARKET TODAY & TOMORROW

5.1 INTRODUCTION: WHAT IS SEPA?

SEPA (Single Euro Payments Area) is a pan-European payment initiative coordinated by the EPC (European Payments Council), which enables merchants and enterprises to collect Euro currency payments from bank accounts in the 34 countries covered by the initiative.

It was designed to create a single domestic market in place of the fragmented national markets, allowing Euro payments to be transferred freely across borders in Europe.

SEPA credit transfer and direct debit were launched in 2008 and 2009, respectively. In August 2014, all national credit transfer and direct debit procedures in Eurozone countries officially expired; this could be deferred until the end of October 2016 for non-Eurozone states in the EU.

With the increasing liberalisation of the European payments market, enshrined in key legislation such as PSD (Payments Service Directive) and PSD2, the traditional banking monopoly of offering SEPA direct debit services has eroded, allowing payment service providers to enter the space.

The next step in the harmonisation of payments will come with SEPA Instant Payments. While a number of countries (including Denmark, Poland, Sweden and the UK) have launched national schemes, there is currently no international option for real-time payments. However, the EPC is developing SCT Inst (SEPA Instant Credit Transfer), which is due to come into force in November 2017 as a pan-European instant payments scheme.

5.2 DIGITAL GOODS & SEPA: KEY TRENDS & DRIVERS

Increasingly, digital content providers seek to offer their content across multiple markets. While these operators have long been able to facilitate international payments, there has been a problem: Payments have historically incurred additional costs and settlement times could be lengthy. The combination of SEPA implementation, allied to SCT Inst, should dramatically alleviate both these issues as far as Euro payments are concerned.

- **Improved opportunity for international subscription-based payments –** setting up payments via direct debit is efficient and allows payment automation. With digital content increasingly offered on a subscription basis, direct debit is an ideal mechanism for monetising content on an ongoing basis. SEPA reduces the barriers to cross-border direct debits, allowing merchants to establish them between any two bank accounts within the EU.

- **Reduced banking transaction fees –** a key benefit that is likely to result from the introduction of SEPA is a reduction in transaction costs as companies are obliged to charge the same rate for a cross-border Euro payment within SEPA as they would for a national payment in Euros.

- **Transparency –** merchants will be able to benefit from the integration of clearing markets, whether directly or indirectly, as the differences in fees become more transparent.

- **Economies of scale –** furthermore, they may be able to leverage economies of scale by combining payment processing across different Euro area countries, thereby leading to further cost savings.

SEPA also places obligations on the billing entity, which can no longer insist that a payment is made by direct debit from an account based in their country.

5.3 MARKET PROSPECTS

i. The Brexit Challenge

While the UK is not a member of the Eurozone, it is nonetheless a member of SEPA. The UK's imminent departure from the EU could therefore result in restricted access to the EU market for UK-based payment service providers. It may be that, as part of the EEA (European Economic Area) or EFTA (European Free Trade Association), the UK could still remain part of SEPA and comply with its regulation. However, that will depend on the precise terms of the UK's Brexit agreements, which are unlikely to be finalised until 2017-2018.

ii. Rapid Deployment of SCT Inst

Another key challenge facing the industry, and payment service providers in particular, is that SCT Inst transactions are expected to be introduced within 12 months of the publication of the scheme.

While the EPC is confident that the providers will be able to 'quickly implement major changes', it will be critical, for example, for providers only to have to connect to a single clearing and settlement infrastructure to avoid any interoperability issues.

iii. The Need for Local Knowledge

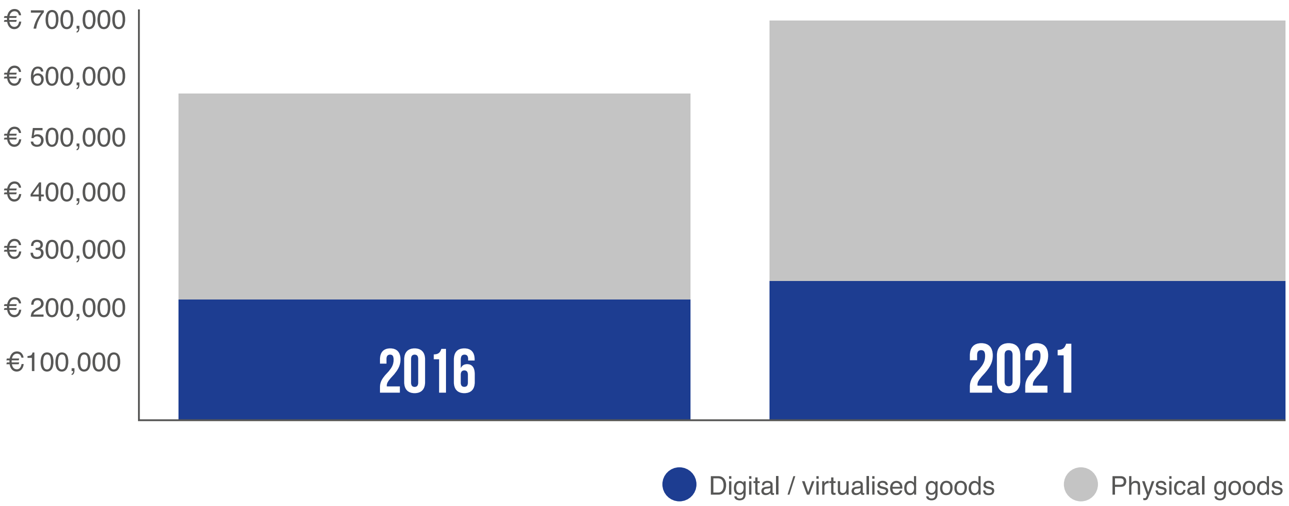
It should also be observed that while the implementation of SEPA streamlines and simplifies the payment process, it does not remove the requirement for online merchants to understand the different requirements of each national market and the payment preferences of consumers in those markets.

Hence, merchants need to work with payment providers who have an understanding of local payment options and adoption levels and of the optimal means of monetising content on a per market basis.

iv. The Opportunity: Reduced Costs, Greater Efficiencies, New Revenues

Net savings from the introduction of SEPA were evaluated by PwC in 2014 at €21.9 billion per annum across all stakeholders (including €13.2 billion to corporates). The implementation of a frictionless payments offering also makes it more attractive to offer content and services to international customers thereby boosting the likelihood of increased revenue streams.

FIGURE 3 & TABLE 4
EUROPEAN ECOMMERCE MARKET (€M), 2016 & 2021



Source: Juniper Research

Juniper Research estimates that total eCommerce in Europe (comprising mobile and online sales of digital goods, virtualised goods such as eTickets, and physical goods) will increase from €570 billion in 2016 to nearly €700 billion in 2021 for an average annual growth rate of 4.1%.

While Juniper Research does not provide market forecasts specifically focusing on SEPA payments, we believe it is likely that their proportion of regional payments is likely to increase over the forecast period and will therefore grow at a rate of around 5.0 - 5.5% per annum in that time.

	2016	2021	GROWTH
Games	€ 205,956	€ 252,874	22.8%
Video	€ 364,751	€ 446,081	22.3%
Total	**€ 570,707**	**€ 698,955**	**22.5%**

Source: Juniper Research

6. CONCLUSIONS & RECOMMENDATIONS

6.1 LEVEL 2 MERCHANTS SHOULD DEPLOY CARRIER BILLING SOLUTIONS

While the primary beneficiaries from carrier billing deployment have been app stores such as Google Play and larger OTT companies such as Facebook, we would argue that it is increasingly important for Level 2 merchants to consider integrating carrier billing as a payment option.

As consumer affinity with the online environment grows, digital content purchase activity is expanding beyond what was in effect a second wave of 'walled gardens' (the app stores) into the wider web. This in turn creates greater opportunities for the smaller merchants to monetise consumers on a D2C (Direct to Consumer) basis rather than reply on sales via storefronts.

We would argue that the drivers of carrier billing in the storefront space are equally applicable to smaller merchants. Indeed, given the lower levels of traffic such merchants receive, the uplift in conversion rates that typically occur could result in a significant revenue uplift.

6.2 MNOS SHOULD PARTNER WITH CARRIER BILLING PLATFORM PROVIDERS

For MNOs seeking to develop new revenue streams, we would argue that carrier billing provides the optimal means of maintaining a foothold – a potentially lucrative foothold – in the content value chain.

Carrier billing leverages an existing operator asset, which can be deployed at minimal cost to the MNO. While the returns per transaction will be lower than for portal content, this is more than offset by the dramatic uplift in transaction volumes.

6.3 CARRIER BILLING SHOULD BE SEEN AS A VIABLE SOLUTION FOR DIGITAL SUBSCRIPTION SERVICES

Given the relatively low monthly subscription cost of many digital services, carrier billing should be seen as a useful opportunity to increase the customer base, owing to its ability to be deployed across web as well as app stores.

In some cases, this may well be a natural consumer progression from making *ad hoc*, in-app purchases using the mechanism, with consumers increasingly becoming comfortable with the speed and simplicity of the option.

6.4 MERCHANTS NEED TO OFFER AN ARRAY OF BILLING OPTIONS

It is essential for online merchants to provide consumers with multiple billing options, including popular eWallets and, if possible, carrier billing for digital goods. The net result is likely to be an uplift in conversion rates with consumers able to choose a billing mechanism that they feel most comfortable with at any given time.

The beauty of eWallets is that they allow stored credentials (e.g. bank account or card) to be used across multiple sites, while carrier billing essentially replicates this by using the phone number. In both cases, friction at the point of purchase is markedly reduced.

6.5 MERCHANTS NEED TO UNDERSTAND LOCAL MARKET CONDITIONS

While the implementation of SEPA reduces the amount of friction in the European digital payments space, at least regarding Euro payments, most merchants are unlikely to be cognisant of the payment characteristics in each of their potential international markets.

If those merchants wish to maximise the revenue opportunities across an array of markets, it is essential that they work with payment partners possessing an in-depth knowledge of both the primary current payment mechanisms in those markets and of the likely development of those markets (whether spurred by regulatory, technological or social changes). This will allow the merchants to deploy billing mechanisms most appropriate to the market in question. For example, given the prevalence of iDeal in the Netherlands, it would be sensible to offer this as an option in that market.

7. ABOUT DIMOCO

7.1 COMPANY PROFILE

7.1.1 CORPORATE BACKGROUND

DIMOCO has paved the way in carrier billing, mobile ticketing, messaging and other payment services as an industry leader at the edge of mobile technology. Headquartered in Austria and with offices across Europe, the company with the FinTech philosophy at its core recently established a further company which acts as a payment service provider, leveraging this position to stimulate the creation of new digital services.

Launched in 2000, DIMOCO Carrier Billing is a payment institute enabling almost 1 billion European subscribers to purchase goods and services from merchants and aggregators with their mobile devices. Subscribers are charged via the operators' billing system, which is available on all distribution, communication and consumption channels, serving any digital content industry needs. The European-wide regulated payment institute for carrier billing and payment services holds a payment service act license from the Austrian Financial Market Authority (FMA) since January 2016, as its license was passported to all 28 EU member states. DIMOCO is trusted by local and global mobile network operators and performs hundreds of millions of mobile transactions for merchants, aggregators, corporates and public transport services.

DIMOCO Payment Services, launched in 2016, is a payment service provider that processes payments for eCommerce merchants with cards, online bank transfers, SEPA direct debit and other payment methods.

DIMOCO Carrier Billing and DIMOCO Payment Services are available throughout Europe by means of key partnerships and direct connections with Mobile Network Operators and existing merchant portfolios. DIMOCO is a privately held company renowned for its depth of knowledge and wide expertise in these areas. The company focuses on long-term strategic co-operations with business customers primarily in the European market, with undergoing expansion in Asia.

7.1.2 PRODUCT RANGE

DIMOCO Carrier Billing has products for mobile devices as well as additional offerings, such as web platform solutions. In addition to DIMOCO's one-off services, the company offers the option of adding periodic payments to enhance client business models.

DIMOCO Payment Services offers a combination of payment methods, tailored industry-specific solutions, transaction risk management tools and flexible value added services.

IMPRINT

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